

TAB 9

Highway and rail routes used to analyze transportation impacts and
estimated transportation impacts for the States of Delaware, Maryland,
Virginia, West Virginia and the District of Columbia

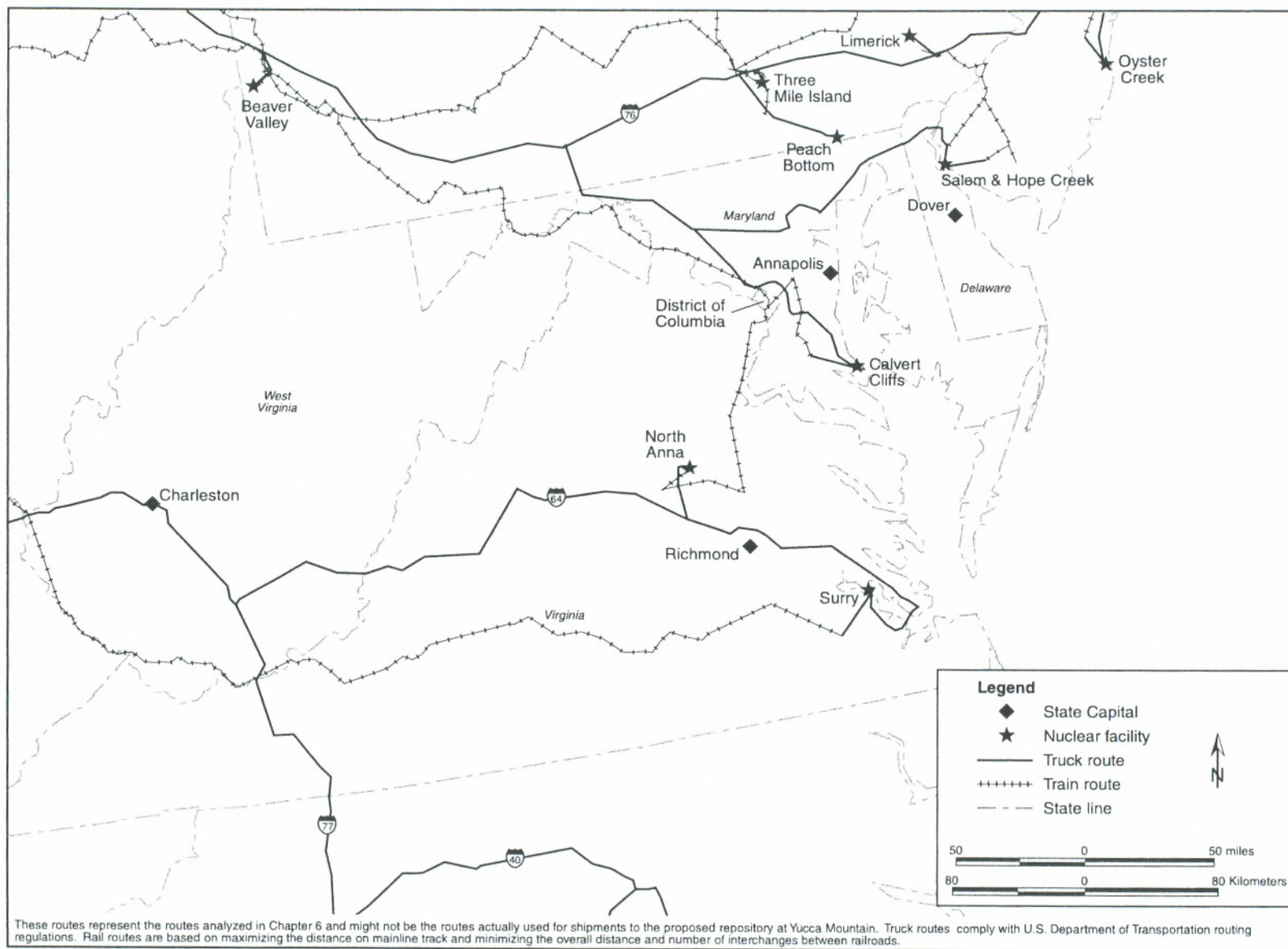


Figure J-37. Highway and rail routes used to analyze transportation impacts - Delaware, Maryland, Virginia, West Virginia, and the District of Columbia.

Table J-77. Estimated transportation impacts for the States of Delaware, Maryland, Virginia, West Virginia, and the District of Columbia (page 3 of 3).

Impact category	Mostly legal-weight truck	Mostly rail					
		Ending rail node in Nevada ^a					
		Caliente ^b	Dry Lake ^c	Jean ^d	Beowawe ^e	Eccles ^f	Apex ^g
DISTRICT OF COLUMBIA							
<i>Shipments</i>							
Truck (originating/total)	0/0	0/0	0/0	0/0	0/0	0/0	0/0
Rail (originating/total)	0/0	0/312	0/312	0/312	0/312	0/312	0/312
<i>Radiological impacts</i>							
<i>Incident-free impacts</i>							
Population (person-rem/LCFs) ^h	0.0×10 ⁰ /0.0×10 ⁰	2.7×10 ⁰ /1.3×10 ⁻³	2.7×10 ⁰ /1.3×10 ⁻³	2.7×10 ⁰ /1.3×10 ⁻³	2.7×10 ⁰ /1.3×10 ⁻³	2.7×10 ⁰ /1.3×10 ⁻³	2.7×10 ⁰ /1.3×10 ⁻³
Workers (person-rem/LCFs)	0.0×10 ⁰ /0.0×10 ⁰	5.9×10 ⁻¹ /2.4×10 ⁻⁴	5.9×10 ⁻¹ /2.4×10 ⁻⁴	5.9×10 ⁻¹ /2.4×10 ⁻⁴	5.9×10 ⁻¹ /2.4×10 ⁻⁴	5.9×10 ⁻¹ /2.4×10 ⁻⁴	5.9×10 ⁻¹ /2.4×10 ⁻⁴
<i>Accident dose risk</i>							
Population (person-rem/LCFs)	0.0×10 ⁰ /0.0×10 ⁰	5.0×10 ⁻² /2.5×10 ⁻⁵	5.0×10 ⁻² /2.5×10 ⁻⁵	5.0×10 ⁻² /2.5×10 ⁻⁵	5.0×10 ⁻² /2.5×10 ⁻⁵	5.0×10 ⁻² /2.5×10 ⁻⁵	5.0×10 ⁻² /2.5×10 ⁻⁵
<i>Nonradiological impacts</i>							
Vehicle emissions (LCFs)	0.0×10 ⁰	1.2×10 ⁻³	1.2×10 ⁻³	1.2×10 ⁻³	1.2×10 ⁻³	1.2×10 ⁻³	1.2×10 ⁻³
Fatalities	0.0×10 ⁰	4.8×10 ⁻³	4.8×10 ⁻³	4.8×10 ⁻³	4.8×10 ⁻³	4.8×10 ⁻³	4.8×10 ⁻³

- a. Under the mostly rail scenario, rail shipments would arrive in Nevada at one of six existing rail nodes. Impacts would vary according to the node. From that node, DOE would use one of the rail or heavy-haul implementing alternatives to complete the transportation to Yucca Mountain (see Section J.1.2).
- b. For heavy-haul truck transportation, the Caliente junction is the location of the proposed Caliente intermodal transfer station for heavy-haul trucks near the town of Caliente in eastern Nevada. Rail shipments terminating at this junction would continue to Yucca Mountain on heavy-haul trucks on one of the Caliente, Caliente/Chalk Mountain, or Caliente/Las Vegas routes. For branch rail line transportation, railcars would transfer via the Caliente Option to the Caliente Corridor at the Caliente junction.
- c. For heavy-haul truck transportation, the Dry Lake junction is near the location of the proposed Apex/Dry Lake intermodal transfer station for heavy-haul trucks in southeast Nevada. Rail shipments terminating at this junction would continue to Yucca Mountain on heavy-haul trucks on the Apex/Dry Lake route.
- d. For heavy-haul truck transportation, the Jean junction is near the location of the proposed Sloan/Jean intermodal transfer station for heavy-haul trucks in southern Nevada. Rail shipments terminating at this junction would continue to Yucca Mountain on heavy-haul trucks on the Sloan/Jean route. For branch rail line transportation, railcars would transfer from the mainline railroad via the Wilson Pass or Stateline Pass Option of the Jean Corridor, near the Jean junction.
- e. For branch rail line transportation, railcars would transfer from the mainline railroad at the Beowawe junction in north-central Nevada to the Carlin Corridor.
- f. For branch rail line transportation, railcars would transfer from the mainline railroad at the Eccles junction east of Caliente, Nevada, via the Eccles Option or nearby via the Crestline Option of the Caliente or Caliente-Chalk Mountain Corridor. Impacts in states outside Nevada would be the same for the Eccles and Crestline Options of the Caliente and Caliente-Chalk Mountain Corridors.
- g. For branch rail line transportation, railcars would transfer from the mainline railroad at the Apex junction in southeast Nevada, possibly via the Valley Connection, to the Valley Modified Corridor.
- h. LCF = latent cancer fatality.

Table J-77. Estimated transportation impacts for the States of Delaware, Maryland, Virginia, West Virginia, and the District of Columbia (page 2 of 3).

Impact category	Mostly legal-weight truck	Mostly rail					
		Ending rail node in Nevada ^a					
		Caliente ^b	Dry Lake ^c	Jean ^d	Beowawe ^e	Eccles ^f	Apex ^g
VIRGINIA							
<i>Shipments</i>							
Truck (originating/total)	1,538/3,409	0/0	0/0	0/0	0/0	0/0	0/0
Rail (originating/total)	0/0	340/340	340/340	340/340	340/340	340/340	340/340
<i>Radiological impacts</i>							
<i>Incident-free impacts</i>							
Population (person-rem/LCFs) ^h	2.2×10 ¹ /1.1×10 ⁻²	9.6×10 ⁰ /4.8×10 ⁻³	9.6×10 ⁰ /4.8×10 ⁻³	9.6×10 ⁰ /4.8×10 ⁻³	9.6×10 ⁰ /4.8×10 ⁻³	9.6×10 ⁰ /4.8×10 ⁻³	9.6×10 ⁰ /4.8×10 ⁻³
Workers (person-rem/LCFs)	8.2×10 ¹ /3.3×10 ⁻²	2.6×10 ¹ /1.0×10 ⁻²	2.6×10 ¹ /1.0×10 ⁻²	2.6×10 ¹ /1.0×10 ⁻²	2.6×10 ¹ /1.0×10 ⁻²	2.6×10 ¹ /1.0×10 ⁻²	2.6×10 ¹ /1.0×10 ⁻²
<i>Accident dose risk</i>							
Population (person-rem/LCFs)	2.1×10 ⁻³ /1.1×10 ⁻⁶	2.1×10 ⁻³ /1.0×10 ⁻⁶	2.1×10 ⁻³ /1.0×10 ⁻⁶	2.1×10 ⁻³ /1.0×10 ⁻⁶	2.1×10 ⁻³ /1.0×10 ⁻⁶	2.1×10 ⁻³ /1.0×10 ⁻⁶	2.1×10 ⁻³ /1.0×10 ⁻⁶
<i>Nonradiological impacts</i>							
Vehicle emissions (LCFs)	3.4×10 ⁻³	2.8×10 ⁻³	2.8×10 ⁻³	2.8×10 ⁻³	2.8×10 ⁻³	2.8×10 ⁻³	2.8×10 ⁻³
Fatalities	0.027	0.011	0.011	0.011	0.011	0.011	0.011
WEST VIRGINIA							
<i>Shipments</i>							
Truck (originating/total)	0/3,409	0/0	0/0	0/0	0/0	0/0	0/0
Rail (originating/total)	0/0	0/509	0/509	0/509	0/509	0/509	0/509
<i>Radiological impacts</i>							
<i>Incident-free impacts</i>							
Population (person-rem/LCFs) ^h	3.4×10 ¹ /1.7×10 ⁻²	1.6×10 ⁰ /8.1×10 ⁻⁴	1.6×10 ⁰ /8.1×10 ⁻⁴	1.6×10 ⁰ /8.1×10 ⁻⁴	1.6×10 ⁰ /8.1×10 ⁻⁴	1.6×10 ⁰ /8.1×10 ⁻⁴	1.6×10 ⁰ /8.1×10 ⁻⁴
Workers (person-rem/LCFs)	6.2×10 ¹ /2.5×10 ⁻²	6.6×10 ⁰ /2.6×10 ⁻³	6.6×10 ⁰ /2.6×10 ⁻³	6.6×10 ⁰ /2.6×10 ⁻³	6.6×10 ⁰ /2.6×10 ⁻³	6.6×10 ⁰ /2.6×10 ⁻³	6.6×10 ⁰ /2.6×10 ⁻³
<i>Accident dose risk</i>							
Population (person-rem/LCFs)	1.8×10 ⁻³ /9.2×10 ⁻⁷	3.9×10 ⁻⁴ /2.0×10 ⁻⁷	3.9×10 ⁻⁴ /2.0×10 ⁻⁷	3.9×10 ⁻⁴ /2.0×10 ⁻⁷	3.9×10 ⁻⁴ /2.0×10 ⁻⁷	3.9×10 ⁻⁴ /2.0×10 ⁻⁷	3.9×10 ⁻⁴ /2.0×10 ⁻⁷
<i>Nonradiological impacts</i>							
Vehicle emissions (LCFs)	6.9×10 ⁻³	8.5×10 ⁻⁴	8.5×10 ⁻⁴	8.5×10 ⁻⁴	8.5×10 ⁻⁴	8.5×10 ⁻⁴	8.5×10 ⁻⁴
Fatalities	0.032	0.004	0.004	0.004	0.004	0.004	0.004

Table J-77. Estimated transportation impacts for the States of Delaware, Maryland, Virginia, West Virginia, and the District of Columbia (page 1 of 3).

Impact category	Mostly legal-weight truck	Mostly rail					
		Ending rail node in Nevada ^a					
		Caliente ^b	Dry Lake ^c	Jean ^d	Beowawe ^e	Eccles ^f	Apex ^g
DELAWARE							
<i>Shipments</i>							
Truck (originating/total)	0/1,077	0/0	0/0	0/0	0/0	0/0	0/0
Rail (originating/total)	0/0	0/0	0/0	0/0	0/0	0/0	0/0
<i>Radiological impacts</i>							
<i>Incident-free impacts</i>							
Population (person-rem/LCFs) ^h	1.6×10 ⁰ /8.2×10 ⁻⁴	0.0×10 ⁰ /0.0×10 ⁰	0.0×10 ⁰ /0.0×10 ⁰	0.0×10 ⁰ /0.0×10 ⁰	0.0×10 ⁰ /0.0×10 ⁰	0.0×10 ⁰ /0.0×10 ⁰	0.0×10 ⁰ /0.0×10 ⁰
Workers (person-rem/LCFs)	1.7×10 ⁰ /6.9×10 ⁻⁴	0.0×10 ⁰ /0.0×10 ⁰	0.0×10 ⁰ /0.0×10 ⁰	0.0×10 ⁰ /0.0×10 ⁰	0.0×10 ⁰ /0.0×10 ⁰	0.0×10 ⁰ /0.0×10 ⁰	0.0×10 ⁰ /0.0×10 ⁰
<i>Accident dose risk</i>							
Population (person-rem/LCFs)	5.2×10 ⁻⁴ /2.6×10 ⁻⁷	0.0×10 ⁰ /0.0×10 ⁰	0.0×10 ⁰ /0.0×10 ⁰	0.0×10 ⁰ /0.0×10 ⁰	0.0×10 ⁰ /0.0×10 ⁰	0.0×10 ⁰ /0.0×10 ⁰	0.0×10 ⁰ /0.0×10 ⁰
<i>Nonradiological impacts</i>							
Vehicle emissions (LCFs)	6.4×10 ⁻⁴	0.0×10 ⁰	0.0×10 ⁰	0.0×10 ⁰	0.0×10 ⁰	0.0×10 ⁰	0.0×10 ⁰
Fatalities	3.1×10 ⁻⁴	0.0×10 ⁰	0.0×10 ⁰	0.0×10 ⁰	0.0×10 ⁰	0.0×10 ⁰	0.0×10 ⁰
MARYLAND							
<i>Shipments</i>							
Truck (originating/total)	867/1,944	0/0	0/0	0/0	0/0	0/0	0/0
Rail (originating/total)	0/0	169/312	169/312	169/312	169/312	169/312	169/312
<i>Radiological impacts</i>							
<i>Incident-free impacts</i>							
Population (person-rem/LCFs) ^h	2.5×10 ¹ /1.3×10 ⁻²	1.0×10 ¹ /5.0×10 ⁻³	1.0×10 ¹ /5.0×10 ⁻³	1.0×10 ¹ /5.0×10 ⁻³	1.0×10 ¹ /5.0×10 ⁻³	1.0×10 ¹ /5.0×10 ⁻³	1.0×10 ¹ /5.0×10 ⁻³
Workers (person-rem/LCFs)	4.8×10 ¹ /1.9×10 ⁻²	1.3×10 ¹ /5.1×10 ⁻²	1.3×10 ¹ /5.1×10 ⁻²	1.3×10 ¹ /5.1×10 ⁻²	1.3×10 ¹ /5.1×10 ⁻²	1.3×10 ¹ /5.1×10 ⁻²	1.3×10 ¹ /5.1×10 ⁻²
<i>Accident dose risk</i>							
Population (person-rem/LCFs)	6.6×10 ⁻³ /3.3×10 ⁻⁶	3.2×10 ⁻³ /1.6×10 ⁻⁶	3.2×10 ⁻³ /1.6×10 ⁻⁶	3.2×10 ⁻³ /1.6×10 ⁻⁶	3.2×10 ⁻³ /1.6×10 ⁻⁶	3.2×10 ⁻³ /1.6×10 ⁻⁶	3.2×10 ⁻³ /1.6×10 ⁻⁶
<i>Nonradiological impacts</i>							
Vehicle emissions (LCFs)	8.4×10 ⁻³	3.8×10 ⁻³	3.8×10 ⁻³	3.8×10 ⁻³	3.8×10 ⁻³	3.8×10 ⁻³	3.8×10 ⁻³
Fatalities	0.007	0.007	0.007	0.007	0.007	0.007	0.007